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Title:

Sensory analysis with culinary professionals, master brewers and small primary producers – Applications, developments and insights from use of fast projective methods in the real world of experimentation and small-scale production

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Abstract: (Your abstract must use **Normal style** and must fit in this box. Your abstract should be no longer than 300 words. The box will 'expand' over 2 pages as you add text/diagrams into it.)

In recent years the application of fast sensory methods has exploded. Different projective methods exist that instruct respondents to place samples according to similarity and adding descriptors to the samples¹. They are usually performed with sensory panelists or increasingly in later years also with consumers e.g. ^{2,3}.

Culinary professionals, master brewers, and small-scale primary producers occupy a particular role in society – the work with the creation and transformation of some of the most basic matters of our lives – food and beverages. They are part highly skilled workers and part artisans with a vision for the end result. In addition they in general use their senses to guide their decisions and many of them have a highly educated palate.

However, when prototyping new foods or beverages in their experimental lab (often a kitchen) or at a brewery, there is often little money and tradition for formal sensory tests.

We present three case stories of working with fast projective methods to capture and document the core of sensory properties in an inexpensive manner: 1. Description of beers in a product development setting, 2. Finding similarities in a large set of spice mixes by culinary professionals, and 3. Differences between spontaneously-fermented beet roots by small-scale producers.

Further, we developed some new features of projective mapping. We have very successfully implemented the use of large plastic coated sheets with 2 x 2 cm grids, for fast data handling.

We identify that the data analysis and comprehension is the main challenge for users of fast sensory methods that are not sensory scientists. The necessary statistical skills often are lacking with these professionals. We suggest to limit the number of descriptors each respondent can give for a sample to maximum 5, to avoid too complex data analysis and plots.

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2. Giacalone, D., Machado, L. R., & Frøst, M. B. (2013). Consumer-based product profiling: application of Partial Mapping® for sensory characterization of specialty beers by novices and experts. *Journal of Food Products Marketing*, 19, 201–218. doi:10.1080/10454446.2013.797946
3. Reinbach, H. C., Giacalone, D., Ribeiro, L. M., Bredie, W. L. P., & Frøst, M. B. (2014). Comparison of three sensory profiling methods based on consumer perception: CATA, CATA with intensity and Mapping®. *Food Quality and Preference*, 32, 160–166. doi:10.1016/j.foodqual.2013.02.004

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